The Causes of Recession Following Stabilization

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1. Introduction

The primary and partially contradictory economic policy aims of the reforming governments in Eastern Europe and the USSR during their first months in office are price liberalization and price stabilization. They are also preliminary aims, the purpose of which is to remove economic distortions and thus prepare the ground for the next and more difficult stage of institutional changes and other "structural" reforms.

These two stages involve a series of shocks to the economy. The shocks may be divided into those arising on and directly affecting the supply side and those originating from the demand side. There are several types of supply-side shocks to be discussed later in the paper, of which possibly the most important takes the form of large changes in relative prices. There are also several reasons why aggregate demand may be significantly reduced and the composition of the purchasing power between households, enterprises and the government sharply changed.

Such shocks are bound to reduce activity. A weakening of economic activity is therefore in part the inevitable price of, and in part a condition for, the adjustment of the economy to the new rules of resource allocations and the new price environment.

In Poland, corrective recession of this type was expected and was looked at as a part of the program for 1990-91, just as the corrective inflation in January 1990 was part of the program of stabilizing prices since February

1990. Nevertheless, this recession seems to be, in 1990-91, much deeper than what most Polish policy makers and the IMF experts were predicting in November and December 1989 when the details of the January 1990 package of measures were worked out. The surprises of the stabilization period also apply to the behavior of a number of other important macroeconomic variables, in addition to output.

In this paper we shall describe and interpret only some of these surprises. The focus of attention will remain the recession, for it has become evident that the depth of this recession, not only in Poland but throughout Eastern Europe and the USSR, is, or is going to be, truly large, comparable to the Great Depression of the 1930s. The debate that is now raging among policy makers, their advisors, institutional experts and academic economists, attempts to establish the contributions to that recession of the liberalizing supply-side shocks and of the stabilizing measures in the form of contractionary fiscal, incomes and monetary policies.

If the supply-side contribution is dominant, then the recession represents Schumpeterian creative destruction, designed to release resources locked in unproductive or insufficiently productive uses, for their future use elsewhere. If the demand-side contribution is large, then the recession is in part a price to be paid for regaining macroeconomic control. In this case, there is also the possibility to be considered that the demand contraction has been excessive.

2. Aims and Effects of the Stabilization Policy in Poland in 1990

The stabilization policy had three principle aims:

- reduction of inflation from between 20 to 50 percent per month in August-December 1989 to

about 5 percent in March 1990, and about 1-2 percent per month in the second half of 1990;
- transition from a producers' to a consumers' market and, as a result, a general strengthening of budgetary constraints on enterprises; and
- a substantial reduction of the share of dollar currency in the total money supply.

The first aim was to be attained with the aid of three nominal "anchors": an almost total wage freeze, limited expansion of money supply, and a fixed rate of exchange. The second aim was to be reached through a balanced budget of the government and price liberalization, and the third by a bank interest for zloty savings considerably higher than that for dollar savings.

The aims so formulated were broadly attained in the stipulated time period. (The only exception was the inflation rate, which increased to about 5 percent a month in the second half of 1990.) In that sense, the realization of the stabilization policy in its central part was a success. On the one hand, the original program and the policy to implement it may also be judged in terms of the six performance criteria adopted by the International Monetary Fund (IMF) to monitor the performance under a Stand-By Agreement with the Polish government (see Table 1). These criteria may be supplemented by four additional measures: the cumulative price increase, the fall in economic activity, the increase in real total money supply, representing the sum of the changes in the international reserves of the banking systems and in net domestic assets (NDA), and change in real credit to non-government.

Comparison of the program figures and actual performance shows that the realization of the stabilization program differed substantially from expectations in the case of several such measures.

Table 1. Poland: Performance Under the Stand-By Arrangement, First Half of 1990 and the Whole of 1990

	First half 1990		1990	
	Program[a]	Actual	Program	Actual
A. IMF Criteria				
1. Change in real wages, five main sectors (in percent, 1989=100)[b]	-18	-38	-31	-31
2. Credit to the general government (percent of GDP)	0.7	-8.0	0.0	-1.4
3. Deficit of "core" general government (percent of GDP)	1.6	-10.0	-0.1	3.0
4. Change in real NDA (in percent)[b]	-28	-58	-24	-51
5. Change in net international reserves of the banking system (in ul. USD)	-165	3,100	245	2,650
6. Contrating new short-term debt (in mil USD)	400	183	700	
B. Additional Criteria (percent)				
7. Change in GDP	--	-15	-5	-12
8. Change in real money supply	-25	-42	-5	-42
9. Change in real credit to non-government	0	-18	20	0
10. Increase of the consumer price index (within the period)	75	172	94	250

[a]The 'program' numbers refer to agreed upper limits or are implied by such limits and the targeted increase in the consumer price index.

[b]Actual criteria 1 and 4 were formulated in terms of nominal magnitudes. The numbers in the table are implied by these magnitudes and the price increases specified in row 10.

Note: The nominal GNP is taken to be 597 trillions for the whole of 1990 and 220 trillions for its first half.

Sources: Data provided by the Polish authorities and/or the IMF (1990a) and (1990b).

Figure 1
Shifts in Aggregate Supply and Demand Functions Following Stabilization and Liberalization Measures

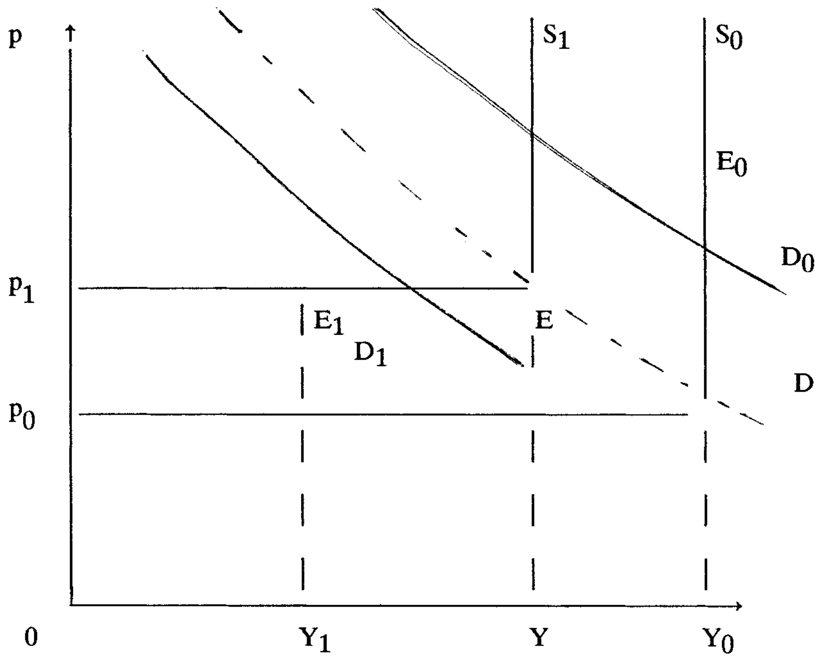
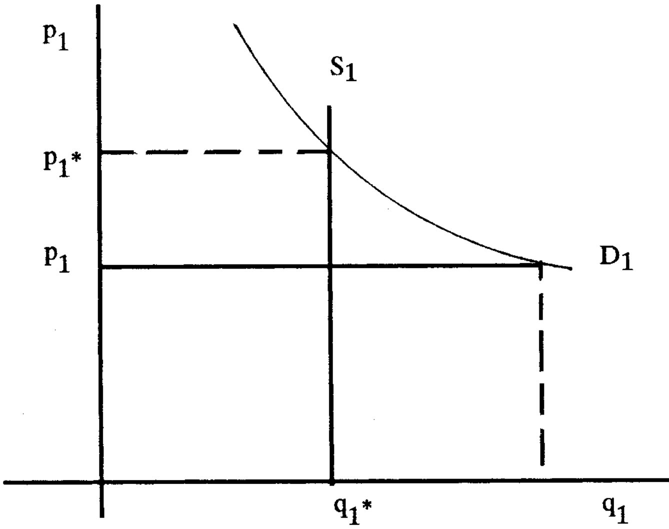
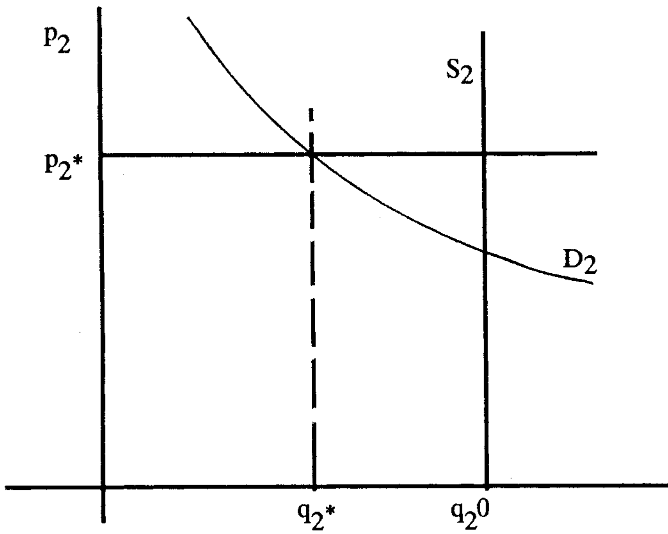


Figure 2
Forced Substitution and Potential Output





In general, the monetary and budgetary policies were much more restrictive than the program had envisaged, and despite this the inflation rate was much higher than anticipated. The economic recession is likewise deeper than had been originally foreseen. Some of the surprises have been of the welcome category. They included above all: (1) a comfortable budget surplus, (2) an extraordinary stability of the exchange rate, (3) a high effectiveness of the monetary policy, and (4) a high speed of structural changes driven by a rapid growth of the private sector and a fast growth of exports to Western markets. I shall comment on these developments briefly later in the paper. (For a more detailed discussion, consult Gomulka 1991.)

However, two surprises have been of the unwelcome variety: a much faster price inflation and a much deeper recession.

3. Diagrammatic Presentation of the Economy's Response to the 1990 Policies

In Figure 1, the short-term equilibrium of the Polish economy is represented by point E_0 just before and by point E_1 after the January 1, 1990, measures were taken.

In Figure 1, point E_0 lies on the vertical segment of the initial supply curve S_0 to indicate the presence of excessive demand and inflation. The price liberalization does two things to it: it shifts the horizontal part of the supply curve upwards and it reduces the (maximum) potential output from Y_0 to Y, the difference Y_0-Y representing the impact of the supply shock. Ideally, the demand curve should be shifted only from D_0 to D, so that, at new prices, demand is still sufficient to buy the new potential output. Suppose, however, that demand is shifted further, from D_0 to D_1. The difference Y-Y_1 would then be attributed to an excessive contraction of aggregate demand. The problem is that Y is not known, and only the aggregate outcome of the two effects is observed. Still, it

may be useful to discuss in some detail the factors which must have contributed to each of these two effects.

4. The Causes of the Supply Contraction

Forced substitution increases potential output before the reform and the immobility of resources reduces it after the reform. The effect of forced substitution is shown in Figure 2.

Before the reform, prices of two substitutable goods, 1 and 2, are p_1 and p_2. At these prices, there is a shortage of good 1 and a surplus of good 2. The unsatisfied consumers respond by buying what is available, removing, as a result, the surplus of good 2. After the reform, price p_1 moves upwards to equilibrate demand and supply in that market. But price p_2 is set at the unit cost level and is, I assume, downward-inflexible. Consequently, output of good 2 must drop to q_2*.

Potentially even more potent may be the effect of the asymmetry between the first, large change in the composition of demand in response to large changes in incomes and relative prices and the slow capacity of the supply side to make corresponding adjustments in the composition of outputs. Demand tends to move away from more expensive to less expensive goods and from less essential to more essential ones. While the supplies of the goods in greater demand usually cannot be increased easily, the supplies of the less demanded goods must be and are reduced quickly. This produces an overall fall in output immediately. The fall reduces incomes and may have a further contractionary effect on output.

In Poland, in the initial aftermath of the January 1, 1990, reform, purchasing power was shifted from durable consumer goods to foodstuffs. Food prices increased sharply, but food consumption remained almost unaffected. Domestic sales of textiles and other consumer goods deemed less essential fell drastically. Their producers could have increased their exports, but largely

failed to do so. In a study of 94 groups of industrial products, compared to 1989, output in 1990 declined by more than 25 percent in 36 cases, it declined by less than 25 percent in 49 cases, and it increased in 8 cases (CUP, 1991). This large change in the composition of output is indicative of the power of this "structural factor," or the supply shock.

5. The Contraction of Aggregate Demand: Was It Excessive?

Given the switch on January 1, 1990, to a demand-constrained regime, the standard IS/LM analysis may be used to discuss the shift of the aggregate demand function caused by the reform package. The two key equations are as follows:

$$Y = I(r) + C(Y^d, M/p) + G + X(Y, e/p)$$
$$M/p = L(Y, r)$$

where $C(Y^d, M/p)$ is consumption as a function of disposable income Y^d and monetary wealth M/p; X is net export as a function of income Y and the real rate of exchange of the zloty e/p, and $L(Y,r)$ is the demand for money. Assuming G is constant, a fall in real money holdings M/p generates or requires a rise in the interest rate r and a fall in income Y. The magnitude of the fall in income depends on the elasticities of the four functions: I, C, X and L, with respect to appropriate variables.

It is interesting that despite a large increase in r, total real fixed investment declined only by 9 percent. The policy of low wages secured large profits, and these profits not only improved the finances of the government but also helped to sustain investment activity of state enterprises as well as reduce bankruptcies and unemployment.

The original intention of policy makers was to use a tax-based incomes policy as an instrument to control price inflation. The chief reason was uncertainty about how

effective monetary policy alone would be as an instrument to control wages. Indeed, it was feared that, in Polish and indeed East European conditions, a monetary policy in order to be really effective would have to be extremely contractionary. In the event, price inflation in the first quarter of 1990 was much higher than assumed, but the authorities decided, for fear of even larger inflation, to stick to the original monetary targets in nominal terms. Consequently, real money balances declined more sharply than anticipated and the enterprise sector experienced an unprecedented liquidity squeeze. The result was that during the first six months of 1990, wages remained well below the ceiling levels specified by the incomes policy. Only in June 1990, when the authorities decided to relax somewhat fiscal and monetary policies, did the liquidity position of enterprises begin to improve rapidly, enabling them to increase wages to the full limit permitted under the incomes policy. The wage increase reserve accumulated in the first half of 1990 was so large, however, that the policy started to be a binding constraint, for the majority of enterprises, only in November and December of 1990. In the meantime, real wages increased to levels undermining the international competitiveness of enterprises, increasing inflation from a low of 2-3 percent a month in June-August to 5-6 percent a month in October-December, and threatening the fixed exchange rate.

The movements in prices and wages in the second half of 1990 have taught Polish policy makers a lesson in the intricacies of the right coordination of monetary, fiscal and incomes policies. Macro-control has been maintained, but there has arisen also a need for a contractionary correction of the monetary policy at the end of 1990 and the beginning of 1991 to keep in check the pressures that threaten to break the incomes policy.

Having said that, it remains as an indisputable fact that the monetary and fiscal policies in the first half of 1990, and especially in the first quarter of 1990, were much

more restrictive than the IMF-sponsored program had assumed.

The program would have been much different if its authors had known that the administrative price increases would trigger an increase in the consumer price index (CPI), during 1990, by 250 percent and not by 94 percent as assumed (and nearly 80 percent rather than 45 percent in January alone). The problem with this Polish (and indeed other IMF-sponsored) stabilization program is that they are quite literally hostages to a priori assumptions on future price paths. The path is difficult to predict under any circumstances, but it is exceptionally difficult to guess in a situation, such as in Poland in December 1989, in which really large price changes were planned. The IMF has what may be called a "built-in institutional bias" to predict lower inflation and then to work hard with officials to incorporate this prediction into the monetary program. Once the program is in place, it is difficult to adjust it to changing circumstances. It must be said, however, that the Polish monetary authorities reacted to higher-than-anticipated inflation with a monetary policy not less but even more restrictive than planned. In the first quarter of 1990, net credits to the economy could have been increased by a much larger amount without breaking the agreed limit. To achieve this, the base interest rates in February and March should have been lower, as should have been the interest spreads charged by commercial banks. Net exporters had the option, which they used immediately, of selling their accumulated dollar savings at the new, very high exchange rate, to improve their liquidity positions, but net importers had no such option. Their poor liquidity position might have led them to reduce imports and outputs or withhold payment obligations to suppliers.

A "liquidity crunch" is a situation when output is reduced despite the presence of demand and merely because of insufficient liquidity in the economy. Indeed, Calvo and Corecelli (1990) suggest that a crunch of this type did develop and was a major reason why the recession

in the first half of 1990 was exceptionally deep. The size of the separate contribution of this factor, however, is difficult to assess.

As indicated above, the primary reason behind the exceptionally large fall in real supply of money in the first quarter of 1990 was the unexpectedly large increase in prices. Initially it was thought that the monopolistic market structure enabled enterprises to take advantage of the price liberalization by increasing profit margins and reducing output. However, much of the price liberalization took place already in 1989, and profit margins reached a maximum in the fourth quarter of 1989. The margins were declining in the course of 1990. It seems that, simply, the policy designers underestimated the impact on unit costs of the administratively imposed price increases. One particular factor that was missed in estimations of the likely price increase was the impact of the new interest rates. In December 1989 the reformers had outdated (too low) estimates of the share of interest payments in total unit costs in industry. The approximately five-fold increase in these payments had in fact a major impact, though differentiated by sector, and yet to be precisely estimated.

Sometimes it is suggested that the exchange devaluation was excessive and, by raising prices, contributed significantly to the fall in M/p. However, it must be noted that dollar holdings of enterprises and households represented, in December 1989, a large proportion of the total supply of money. Therefore, the zloty devaluation increased the money supply substantially. In fact, since the share of the imports in total GDP was lower than the share of dollars in the total money supply, the zloty devaluation increased the ratio M/p.

6. Was the Macroeconomic Policy Excessively Contractionary?

The question still remains: what hard evidence is there to suggest that, with less restrictive policies, the recession would have been significantly less costly in terms of activity in the short run, without any significant delaying impact on the speed of adjustment in the medium and long term? The evidence which has been or may be used is the following:

1) In March and April 1990 nominal incomes of the population increased sharply, as the payments of bonuses in the material sphere coincided with compensatory payments in the budget and social spheres. Yet the level of activity in the months April-June 1990 remained unchanged. Additional spending increased, instead, the monthly inflation rate, from 4.3 percent in March to 7.5 percent in April and 4.6 percent in May. The policy makers tended to interpret this disappointing response of the economy as a warning against any Keynesian-type relaxation. However, there was at that time a mitigating circumstance, the Easter holidays. Much of the additional spending power of the population went to buy food and food products. The supply of these goods is nearly fixed in the short run, and so it was food prices which increased above all. (The proportion of household money incomes spent on food increased, in the first half of 1990, from the usual 40 percent or so to nearly 60 percent.)

2) In May and June 1990 it became clear that the government budget was heading for a large surplus. Analysis of the unusually large "over-achievement" of the government in meeting most of the six IMF performance criteria for the first quarter of 1990 provided a stimulus for a discussion on the direction of economic policy in the second half of 1990. The government continued to emphasize that macroeconomic control was still fragile and that economic improvement had to come from the supply side rather than from the demand side. But the

supply side was responding too slowly for comfort, and in any case there appeared to exist a demand slack ready to be activated by suitable government policy. Here are the origins of an experiment in controlled relaxation of monetary and fiscal policies for the second half of 1990. The relaxation was decided in early June 1990, this time without consultation with the IMF. Although the new policies and the arguments in their favor met with skepticism at the IMF, they were incorporated in the Letter of Intent for the second half of 1990, prepared by the IMF staff and Polish government negotiators during the consultations in late June and July 1990.

The relaxation of the fiscal stand proved to be as targeted. The monetary expansion, however, went further than intended, especially in the third quarter of 1990. A re-monetization of the economy advanced and the liquidity position of enterprises improved. The impact of these developments on wages, both nominal and real, was discussed in Section 5.

What were the main results of this experiment? Both real output and inflation increased. Industrial sales in the second half of 1990 were 8.5 percent higher than in the first half (CUP, 1991). The increase is probably substantial enough to justify the new policy, provided of course that the increase and the policy were closely connected. Moreover, sales increased despite the fact that housing and other construction activity declined further, by 9.6 percent, in the second half of 1990. This decline was probably a delayed effect of the contraction of aggregate demand in the first half of the year, i.e., the decline in the second half would have been higher without the change in policy.

Unfortunately, the new supply-side shocks in January 1991 – following the dollarization of trade with the former CMEA trading partners – and a new dose of contractionary incomes and monetary policies to reduce inflation, have brought the level of industrial activity in

early 1991 to 3-5 percent less than what it was in early 1990.

3) A comparison may also be made between the stabilization programs of Poland and Yugoslavia, both launched at approximately the same time (December 18, 1989, in Yugoslavia and January 1, 1990, in Poland). Both programs reduced inflation and contracted economic activity, but in Yugoslavia, at least in the first few months, the reduction of inflation was deeper and the contraction of activity smaller. Taking the level of industrial output in the years 1986-87 for 100, in 1990 the level in Yugoslavia dropped to about 90 and in Poland to about 80. It may be argued that the smaller recession in Yugoslavia is related to the fact that the real supply of money was reduced much less in Yugoslavia than in Poland, whatever definition of money one is using.

The problem with this evidence is that the purity of the price system in Yugoslavia was probably much superior to the one before the start of the program in Poland. The Polish program involved also price liberalization, in addition to price stabilization. Hence the supply-side shock and its contractionary impact, the result of changing relative prices, must have been greater in Poland. There was also another factor at work in Poland: enforced dollarization of trade with the Soviet Union, the result of reduced supplies of oil and other raw materials. The consequent losses in terms of trade, in 1990, I estimate to have been about 3 percent of GDP.

What is the conclusion to be drawn from this evidence? The original expectations of Polish policy making, concerning the required fall in output, were surely excessively optimistic. Yet, with a more refined set of policies, a fall in industrial GDP could have probably been smaller, limited perhaps to 15 percent instead of the actual 20 percent. But the right policies are much easier to define with the benefit of hindsight. In the spring of 1990, Polish policy makers were inclined, when in doubt, to err on the side of caution, which in the circumstances meant to stick

to certain, restricted policies rather than go for an uncertain gain in output. The relaxation of policy in the second half of 1990 shows them to have been flexible, prepared to switch attention to the real sphere, even at a significant expense to macroeconomic control.

7. Stabilization Versus Growth: A False Dichotomy?

The great emphasis placed by the Polish program, indeed any stabilization program, on reducing inflation and on contractionary measures deemed necessary to achieve this aim, can produce the impression that a fundamental conflict exists between stabilization policies and growth-oriented policies. This impression has also affected the writings of economists critical of the Polish government program. Consequently, the alternative doctrines have emerged about how to get Poland out of the present recession.

The doctrine of the Balcerovicz Plan regards fast economic development as, ultimately, the primary aim of reforms, but it also sees stabilization of prices and systemic rules as an environment conducive to such development. The Memorandum of the Government of Poland on Economic Reform and Medium-Term Policies for 1991-93, negotiated with the IMF in early 1991, predicts that gross investment "will have to rise by about 12-15 percent per year in real terms during 1991-93." Low nominal interest rates are needed to stimulate such a substantial upsurge in investment activity and positive or at least non-negative interest rates are needed to stimulate large private saving to finance this activity. This implies the need to have stable or nearly stable prices. Low inflation would also enable the linking of the zloty with the U.S. dollar or, better still, with the ecu, by means of a fixed exchange rate. Such price and exchange rate stability, in addition to stable tax and other financial and systemic rules, would in turn attract private foreign investment, in a volume commensurate with the

size of the restructuring needs. Given the size of the public sector, the government's investment in infrastructure and the independent investment activity of state-owned enterprises would continue to be very important. To ensure sufficient revenue to the government and investment finance to state-owned enterprises, profits, according to this doctrine, must be protected by a tax-based incomes policy. The latter policy would, however, become redundant with the progress of privatization.

The alternative doctrine suggests increasing the scope of government investment activity immediately. It also recommends a reduction in taxes, especially in the private sector, a reduction of nominal interest rates and the abolishment of any legal restrictions on wages. The budget deficit would emerge, to be financed by monetary expansion. This in turn would lead to a high inflation and negative real interest rates. The savers would therefore be the losers, and they would be called upon effectively to subsidize the investment activity. The high inflation may discourage foreign investment, but that investment according to this doctrine is unlikely to be substantial anyway.

Both doctrines are internally consistent and have their own merits as well as disadvantages. The doctrine of the Balcerovicz Plan seeks to make Poland not unlike the rest of Europe and to base economic development on tested and reliable policies of developed Western economies. The alternative doctrine would appear to be extremely adventurous, offering the prospect of short-term improvement in activity at a high risk of backsliding into hyperinflation and general economic instability. Programs based on such a doctrine are unlikely to have the cooperation of the international financial institutions, particularly the IMF and the World Bank, nor of the EEC institutions. They are therefore also likely to ensure that Poland would not qualify for the 20 percent debt reduction offered by the Paris Club in three years time.[1]

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1. On March 13, 1991, the Paris Club agreed to forgive Poland about half the $33 billion owed to Western governments. *The New York Times*, March 15, 1991.

An intermediate doctrine between the two suggests abolishing the income policy immediately and leaving to highly restrictive monetary and fiscal policies the task of maintaining macroeconomic control. Here the risk is that policies based on such a doctrine, in a situation when the public sector still dominates, can work only in the presence of very high unemployment and that they will fail to stimulate economic growth. There is also the possibility that if the government, for political reasons, is unable to impose a restrictive incomes policy, so would the authorities of the central bank be unable to impose a restrictive monetary policy.

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